GROWING RASPBERRIES

FARMERS' BULLETIN NO. 2165 / U.S. DEPARTMENT OF AGRICULTURE

A raspberry plantation that is properly managed should yield at least 2,000 quarts of berries per acre by the second year. To get greatest yield and longest productive life from the plantation—

- Choose types and varieties that are adapted to your area.
- Prepare the soil thoroughly.
- Plant only the highest quality stock.
- Maintain a high level of soil moisture by cultivating frequently and irrigating when necessary.
- Apply fertilizer to the plantation every year.
- Cut out all weak canes and suckers.
- Protect plants from insects, diseases, and winter injury.

Revised December 1971
Washington, D.C. Slightly revised October 1975

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402 - Price 25 cents
Stock Number 0100–1486

GROWING RASPBERRIES

Prepared by Northeastern Region
Agricultural Research Service

Raspberries grow best in cool climates. They are not well adapted south of Virginia, Tennessee, or Missouri. Nor are they well adapted to areas in the Plains States or Mountain States where summers are hot and dry and winters are severe.

TYPES OF RASPBERRIES

Three main types of raspberries—red, black, and purple—are grown in the U.S. They differ in several ways other than the color of their fruit.

Red raspberries have erect canes. They usually are propagated by suckers, which grow from the roots of the parent plant. Red raspberries are grown most extensively in the West.

Black raspberries (blackcaps) have arched canes that root at the tips. They are propagated by the plants that grow at the tips of the canes. Blackcaps are grown mostly in the eastern half of the country and in Oregon.

Purple raspberries are hybrids of red raspberries and blackcaps. They have the same growth characteristics as black caps and are propagated in the same way. They are grown extensively only in western New York, though the area where they are adapted is about the same as the area where blackcaps are grown.

Some raspberries have yellow fruit. Yellow raspberries are variations of red raspberries and, except for fruit color, have all the characteristics of red raspberries. They are grown chiefly in home gardens.

For descriptions of raspberry varieties, see page 10.

PLANTING SITE

A wide range of soil types, from sandy loam to clay, are satisfactory for growing raspberries. The character of the subsoil is more important than the type of surface soil. The subsoil should be deep and well drained.

If the subsoil is underlaid by a shallow hardpan or water table, the root system of the raspberry plant will be restricted in its development. Plants with restricted root systems may be damaged during a drought because raspberries need an abundant supply of moisture at all times.

The slope and exposure of the planting site may be important. In areas where winters are severe, raspberries planted on hillsides are in less danger of winter injury than raspberries planted in valleys. In the southern part of the raspberry-growing area, sites with a northern or northeastern exposure retain humus and moisture longer and are better suited to raspberries than sites with a southern exposure.

N35736

Heeling in red raspberry plants.

PLANTING

In the East, plant raspberries in the spring. On the Pacific coast, plant them in the spring or during the rainy season.

Plant only the highest quality stock from a nursery that is certified disease free. If you propagate your own stock, plant only the most vigorous tip plants or suckers.

Preparing the Soil

For the best results, prepare the soil for raspberries as follows:

- Plow, in early spring, to a depth of at least 6 inches.
- Treat the soil with chlordane to control soil insects. Apply 10 pounds of actual chlordane per acre.
- Disk and harrow the soil just before setting the plants.

Prepare the soil for raspberries as thoroughly as you would for corn.

A good plan is to seed and plow under one or two green-manure crops of oats or barley with vetch before you establish a raspberry plantation. This thorough working gets the soil in good condition for planting, and the added organic matter and nitrogen help the plantation to produce an early fruit crop.

Most land that has been in cultivated crops is in good condition for growing raspberries.

Raspberries should not follow potatoes, tomatoes, or eggplant; wilt diseases that affect these crops also affect raspberries. The fungus causing wilt may remain in the soil and damage the raspberry plants.

After plowing, treat the soil with chlordane spray or dust at a rate of 10 pounds of actual chlordane per acre. This is the amount of chlordane contained in 20 pounds of 50-percent chlordane wettable powder or 100 pounds of 10-percent chlordane dust.

Chlordane treatment controls insects in the soil. It is especially needed for controlling grubs in land that has just been in sod.

Immediately before setting the plants, disk and harrow the soil.

Spacing the Plants

Spacing for raspberry plants depends on the system of training you plan to use and on the type of cultivating equipment you own.

Raspberry plants can be set in hills and cultivated on all four sides or set in rows and cultivated on two sides.

For planting in hills, space the plants far enough apart each way so you can cultivate between them. Aline the plants in each direction.

For planting in rows, space the rows far enough apart to cultivate with the equipment you have. Set red raspberry plants 2 to 3 feet apart in the rows and black raspberry plants 4 to 5 feet apart.

If you plan to cultivate with a garden tractor or wheel hoe, 5 feet is enough distance between hills or rows.

If you plan to use a farm tractor, leave 7 to 10 feet between rows.

Setting the Plants

Do not let planting stock dry out. If you cannot plant the stock as soon as you receive it, protect the roots from drying by heeling in the plants.

To heel in, dig a trench deep enough to contain the roots. Spread the plants along the trench, roots down, and cover the roots with moist soil.

If the plants are dry when you receive them, soak the roots in water for several hours before you plant them or heel them in.

When you are ready to set the plants out in the field, keep them moist by covering the bundles or lots of plants with wet burlap or canvas, or with plastic film until they are planted.

Before setting the plants, cut the tops back so they are about 6 inches long. The 6-inch top is useful as a handle when setting the plants and will serve to show the location of the plants and aid in alining them.

To make a planting hole, cut a silt in the soil with a mattock blade or shovel. Press the handle of the tool forward to open the slit.

Put the root of the raspberry plant into this opening. Set red raspberry plants so they are 2 to 3 inches deeper than they were in the nursery. Set black or purple raspberries the same depth as they were in the nursery or no more than one inch deeper.

Withdraw the blade of the mattock or shovel from the soil and firm the soil around the roots of the plant with your foot.

After the planting has been set, the protruding canes of red raspberries can be left in place. To help control disease on purple or black raspberries, however, go over the planting again and cut off all protruding canes.

N35716

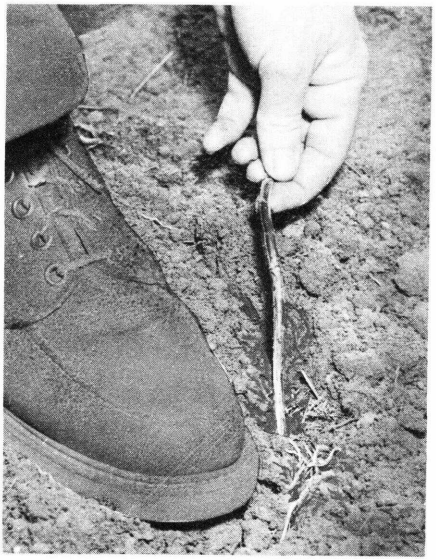
Setting a tip plant of black raspberry.

TRAINING AND PRUNING

Raspberries are easier to cultivate if they are planted in hills than if they are planted in rows. This increased ease of cultivation more than compensates for lower per-acre yields of hill-planted raspberries.

Hill culture may not be practical, however. Some red raspberry varieties have long, slender canes that must be tied. If stakes are not available at reasonable cost, the plants are more profitably set in rows and the canes trained to wire trellises. The wires to which the canes are tied are strung between posts set 15 to 30 feet apart in the rows.

If stakes are available, set long-caned plants in hills. The year after setting the plants, drive a stake into the ground 1 foot from the plant. Tie the canes to the stakes at a point halfway between the ground and the tips of the canes and again near the ends of the canes.



N35717

Firming the soil around the roots of a newly set plant.

N35718

Cutting off the protruding cane of a newly set black raspberry plant as a disease-control measure.

Most varieties of red raspberries are stout caned. They may be planted in hills and grown without training the canes to stakes. If the canes tend to bend over to the ground, they can be cut back until they are self supporting.

Black and purple raspberries need not be tied; just top them to keep them from growing too tall. Top black raspberries at a height of 18 to 24 inches. Top purple raspberries at a height of 30 to 36 inches.

This topping is done by cutting off the ends of the canes as they reach the proper height. Canes should not be topped when they are wet or when rain is forecast that day.

Toward the end of the first season, the canes send out laterals (side branches). The next season small branches grow from buds on the

BN–35909

Left: Black raspberry plant before pruning. Right: The same plant after pruning.

laterals. Fruit is borne on these small branches.

The laterals should be pruned back in the spring, before growth starts. Fruit from pruned laterals is larger and of better market quality than fruit from unpruned laterals.

Cut the laterals back so that two buds per lateral are left on slim canes, up to six buds per lateral on stout canes.

THINNING

Raspberry canes are biennial; they grow the first year, fruit the second, then die. Only the crown and the foots are perennial. Old canes should be removed as soon as their fruit is harvested.

New canes grow from buds on the base of the old canes. Two new shoots usually come up each year. Often, three or more shoots come up. In addition, suckers grow directly from the roots of red raspberries. The new canes and suckers should be thinned immediately after harvest.

Remove weak new shoots and most of the suckers from red raspberries. Leave about seven strong canes per hill.

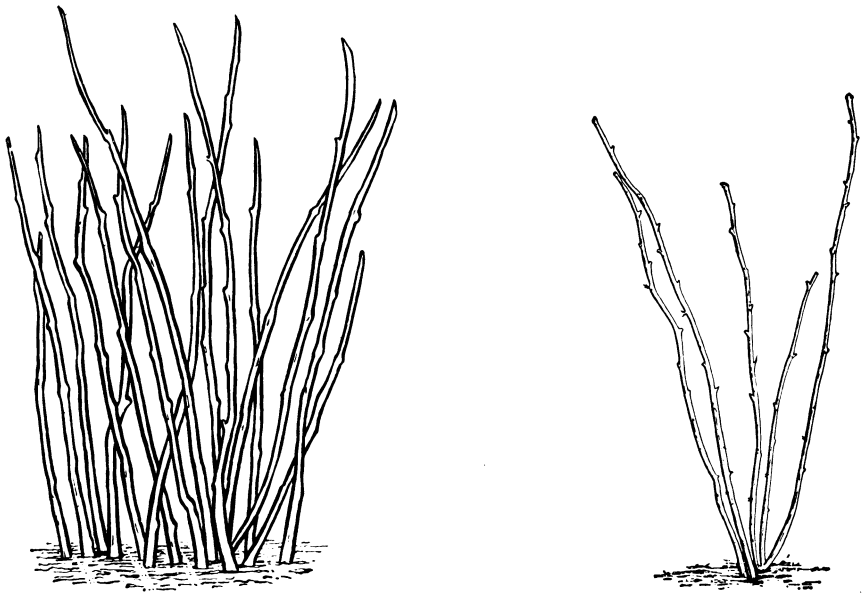
To thin black or purple raspberries, remove canes that are under ½ inch in diameter. Most black raspberry plants have four or five canes that are over ½ inch, but if all the canes are smaller than this, cut out all but the two largest canes.

FERTILIZING

To get maximum yields from your raspberry plantation, apply fertilizer every year in early spring just as new growth begins.

Stable manure, if available, is best for fertilizing. It supplies organic matter as well as nutrients. Apply 10 tons per acre.

If stable manure is not available, use commercial 5–10–5 fertilizer.



BN–35910

Left: Red raspberry plant before thinning and pruning. Right: The same plant after thinning and pruning.

Apply it as a topdressing at a rate of 500 to 600 pounds per acre or spread about ½ cupful in a wide band no closer than about 6 inches from the crown around each hill.

CULTIVATING

Raspberry plantations should be cultivated thoroughly and frequently enough to prevent grass and weeds getting started.

Begin cultivating in early spring and cultivate as often as necessary to keep weeds down. Continue cultivating until harvesttime, resume cultivating after harvest, and continue it until late summer.

Do not cultivate in the fall; this tends to stimulate new growth, which is susceptible to winter injury.

To avoid harming shallow roots of the plants, cultivate only 2 or 3 inches deep near the rows. For best results and greatest safety, cultivate by shallow disking.

To reduce cost of cultivation the first year, grow other crops between the rows of raspberries. Grow crops that need cultivation in spring and early summer.

Good crops for this purpose are cabbage, cauliflower, beans, peas, and summer squash. Do not grow potatoes, tomatoes, or eggplant with raspberry varieties.

Do not grow grain crops; they are not cultivated and they take too much of the moisture and nutrients needed by the raspberry plants.

Do not grow intercrops after the first year; raspberry plants of bear-

ing size need all the soil nutrients and moisture for satisfactory production.

USING HERBICIDES

Herbicides can be used as weed-control aids in raspberry plantings. The use of herbicides supplements cultivation and does not replace it.

Herbicides are most useful in controlling weeds within rows or hills, where hand hoeing otherwise would be necessary. The middles between rows and hills should be cultivated regularly even though herbicides are used near the raspberry plants.

For established plantings, spray the rows with a herbicide before the weeds and new canes emerge in early spring. Use one of the following herbicides mixed with 20 to 40 gallons of water per acre:

- Dichlobenil (2,6-dichlorobenzonitrile), 2 to 4 pounds.
- Simazine [2 - chloro - 4,6 - bis (ethylamino) - *s* - triazine], 2 to 4 pounds.

For each acre of light textured soils, use 2 pounds or less of dichlobenil and simazine, and for heavy textured soils, use 2 to 4 pounds per acre.

Do not apply dichlobenil at the time of shoot emergence. Dichlobenil or simazine treatments are generally effective throughout the growing season. Supplement treatments with mechanical cultivation as needed. Do not repeat use of herbicides in one season.

IRRIGATING

Raspberries need a large amount of water. Irrigation is essential in dry regions and often is profitable even in humid regions.

Irrigated plants are more vigorous and yield fruit over a longer season than unirrigated plants.

In semiarid and arid regions, begin irrigating at the same time you begin irrigating other garden crops.

Apply 1 to 2 inches of water once a week during the fruiting season and once every 2 or 3 weeks during the rest of the dry season. Light sandy soil needs more frequent irrigation than heavier soils.

In humid regions, irrigation pays only if soil moisture is deficient during the time the fruit is growing and ripening. If a drought occurs from blossoming time until the end of harvest, apply 1 to 1½ inches of water once a week.

HARVESTING

Berries that are firm, ripe, and sound bring the highest market price. To get maximum income from your raspberry plantation—

- Pick at least twice a week.
- Handle berries as carefully as possible.
- Discard all decaying, injured, or overripe berries.

The plantation should be picked over frequently to harvest the berries when they are at their best. During hot or wet weather, it may be necessary to pick every other day. Six to eight pickers per acre are needed for harvesting.

Handle the berries as carefully as possible. Use the thumb, index finger, and middle finger to pick the berries. Do not hold berries in the hand after picking. Place them

gently in the cup or basket; do not drop them. After berries are placed in the basket, do not rehandle them.

Discard overripe, injured, or decaying berries. Separate firm fruit and very ripe fruit at time of picking. If two baskets are fitted in a waist carrier, one basket can be used for firm fruit suitable for shipping and the other for fully ripened fruit for canning or freezing.

After filling the baskets in the waist carrier, transfer them to a hand carrier, which always should be kept in the shade.

PREVENTING WINTER INJURY

In parts of Colorado and in the West North Central States, raspberry canes need protection from cold, drying winter winds. Usually, the canes can be protected sufficiently by bending all of them over in the same direction and holding them close to the ground with clods of earth. The earth clods are removed in the spring.

Danger of winter injury to raspberries can be reduced by locating the plantation on an elevated site. Cold air settles to low areas. Winter temperatures are colder and spring frosts occur later in valleys and hollows than in surrounding upland areas.

NEMATODES

One of the most harmful pests to raspberry plantings is the nematode. Several types of nematodes attack raspberries, and some transmit virus diseases or increase root rots.

To combat nematode infestation, treat the soil with nematicides that contain dibromochloropane (DBCP), dichloropropanes and dichloropropenes mixture (DD), sodium methyldithiocarbamate (SMDC), or a mixture of DD and methylisothiocyanate (DD–MENCS).

DD and DBCP control only nematodes, while the others listed are general soil sterilants. DD, which controls nematodes only, and SMDC and DD–MENCS, which are general soil sterilants, should be used as preplant treatments only. DBCP, which controls nematodes only, may be used as a preplant treatment, or may be used at a lower rate at the time of planting or after planting.

Rates of application of the above chemicals vary, depending on soil conditions and method of application. Therefore, follow the manufacturer's directions for specific recommendations.

DISEASES AND INSECTS

Although insects sometimes are harmful to raspberry plantings, they are not as destructive as diseases. Raspberries are attacked by mosaics and other virus diseases, crown gall, wilt, and anthracnose.

Disease damage can be kept to a minimum if these general suggestions are followed:

- Choose disease-resistant varieties.
- Plant only healthy stock.
- Plant black or purple varieties in fields that have not recently been

used for tomatoes, potatoes, or eggplant.

- Remove old canes after harvest.
- Keep the field clean of weeds and fallen leaves.
- Destroy seriously diseased plants. Use pesticides when needed.

For specific information on control of insects or diseases, consult your county agricultural agent or your State agricultural experiment station, or see USDA Farmers' Bulletin 2208, "Controlling Diseases of Raspberries and Blackberries."

PROPAGATING

Raspberries are not difficult to propagate. Many growers propagate new stock for themselves and sell propagated stock to nurserymen. Often, the first harvest from a new raspberry plantation is new planting stock, rather than fruit.

Black and purple raspberries are propagated by burying the tips of the canes; they root and form new plants. Red raspberry plants are propagated from suckers and from root cuttings.

To prepare black or purple raspberry plants for propagation, pinch off the tips of the canes when they are 12 to 18 inches high. The canes branch freely and form a large number of tips for burying.

In late summer, loosen the soil around each plant and bury the tips of the canes 2 to 4 inches deep. Point the tips straight downward in the soil.

The following spring, cut the new tip plants away from the parent plants by severing the old cane. Leave 4 to 8 inches of old cane on the new plants. After the old cane is cut, the new plants are ready to be set out in the field.

The simplest way to propagate red raspberry plants is by transplanting suckers in early spring. Usually, large suckers from the previous year are transplanted, but new suckers can be transplanted also. These current-year suckers are small, but they grow rapidly after they are transplanted.

To propagate red raspberry plants from root cuttings, dig pieces of root from around established plants in early spring. Cut the roots into 2- to 3-inch lengths and scatter the cuttings on the surface of a nursery bed. Cover them with 2 inches of soil.

New plants, which come up from root cuttings during the growing season, can be set out in the field the following spring.

Instead of digging roots of red raspberries for propagation, you can remove all the old plants from a section of the field. Pieces of roots are left in the soil; new plants grow from these pieces. The new plants can be set out in the field the next spring. Usually, another stand of plants will grow the second year. This system of propogation yields a large number of new plants.

VARIETIES

Following are descriptions of the major raspberry varieties grown in the U.S. These descriptions include:

1. State where the variety originated.
2. Time of ripening.[1]
3. Characteristics.
4. Area of special adaptation.
5. Disease susceptibility.

For variety recommendations, consult your county agricultural agent or your State agricultural experiment station.

Commercial stocks of most raspberry varieties are infected with viruses. Obtain plants certified by your State department of agriculture as having originated from essentially virus-free stocks, whenever possible.

Red Raspberries

CANBY

1. Oregon.
2. Midseason.
3. Berries large, firm, light bright red. Plants vigorous, hardy, productive. Canes thornless.
4. One of the best varieties in Pacific Northwest for freezing. Not adapted to heavy soils.

CHIEF

1. Minnesota.
2. Early.
3. Berries rather small, bright red, medium firm, of good quality. Bushes vigorous, productive, among the hardiest commercial varieties for cold areas.
4. Standard early variety for the Upper Mississippi Valley.
5. Should be grown from mosaic-free stock.

FAIRVIEW

1. Oregon.
2. Midseason.
3. Berries large, bright red, firm, and very good flavor. Berries make a good frozen pack. Plants are vigorous, productive, have long fruiting laterals.
4. Grown in Oregon and Washington. Can be grown on heavy soils.
5. Resistant to root rot.

FALLRED

1. New Hampshire.
2. Late summer crop; also a fall crop.
3. Berries medium size, firm, good flavor. Bushes everbearing, productive, vigorous, hardy.
4. Northeastern United States.
5. Should be grown from mosaic-free stock.

HERITAGE

1. New York.
2. Early summer and fall crops.
3. Berries medium size, very firm, medium red, very good flavor. Plants are very vigorous with sturdy, erect canes; produce many suckers; very productive.
4. Grown in northeastern and north central U.S., especially as a home garden variety.

HILTON

1. New York.
2. Midseason.
3. Berries very large, firm, hard to pick, medium red, darken quickly. Bushes productive, stiff erect canes.
4. Northeastern U.S.

JUNE (ONTARIO)

1. New York.
2. Fruiting begins very early and season is long.
3. Berries large, bright red, firm, sometimes lack dessert quality. Bushes hardy in East, vigorous, almost thornless, suckers rather poorly.

[1] The *date* of ripening cannot be given; it depends on many factors in addition to variety. The ripening time—very early, early, midseason, late, or very late—shows when a variety ripens in relation to other varieties grown on the same site. The time lapse between ripening of very early varieties and very late varieties may be as little as 20 days or as much as 40 days.

4. Adapted to heavy soils in New England, New York, Michigan, Wisconsin.

LATHAM

1. Minnesota.
2. Late.
3. Berries large medium red, firm, but often crumbly, quality not high. Bushes very hardy, unusually vigorous, very productive, nearly thornless. Variety good for canning and freezing.
4. Standard red variety in East, hardy in North Dakota.
5. Should be grown from mosaic-free stock. Susceptible to mildew.

MADAWASKA

1. Ontario, Canada.
2. Early.
3. Berries of fair size and quality but somewhat acid and dark. Productive. Very winter hardy.
4. New England States.

MILTON

1. New York.
2. Late.
3. Berries large, medium red, firm, with good flavor. Plants tall, vigorous, moderately hardy.
4. Grown in East in areas where mosaic viruses are especially troublesome.
5. Generally escapes mosaic.

NEWBURGH

1. New York.
2. Midseason, slightly earlier than Latham.
3. Berries very large, bright red, firm, of good quality.
4. Grown in Northeastern States and Pacific Northwest.
5. Has some resistance to root rot on the Pacific coast. Should be grown from mosaic-free stock.

PUYALLUP

1. Washington.
2. Late.
3. Berries large, bright red, somewhat soft. Very good flavor. Good quality when fresh frozen or canned. Plants vigorous, hardy, moderately productive.
4. Grown principally in the Pacific Northwest where it is a major variety. Not adapted to heavy soils.

SEPTEMBER

1. New York.
2. Plant bears early summer and fall crops.
3. Berries medium size and bright red. Good tart flavor. Plants vigorous, hardy, and moderately productive.
4. Grown extensively in Eastern U.S., especially as a home-garden variety.
5. Generally escapes mosaic.

SOUTHLAND

1. North Carolina.
2. Early.
3. Berries medium size, very firm, light red, tart flavor. Plants are vigorous, disease resistant, produce many suckers, productive.
4. Grown in central Atlantic region, westward to south central U.S.
5. Resistant to leaf and cane diseases and are heat tolerant.

SUMNER

1. Washington.
2. Late.
3. Berries medium size, medium red, firm, with high flavor. Plants vigorous, hardy, productive.
4. Well adapted to heavy soils of Pacific Northwest. Somewhat cold hardy,
5. Resistant to root rot on the Pacific coast. Resistant to yellow rust.

SUNRISE

1. Maryland.
2. Early.
3. Berries are medium in size, bright red, firm, good flavor. Plants are vigorous, sucker freely, and have large basal fruiting shoots.
4. Grown in Northeastern and East North-Central United States.
5. Susceptible to mosaic viruses and should be grown from mosaic-free stock.

TAYLOR

1. New York.
2. Late.

3. Berries very large, of high quality. Well liked for freezing.

4. A leading variety in New York and New England; well adapted to Northeastern States.

5. Susceptible to mosaic viruses, and should be grown from mosaic-free stock.

VIKING

1. Ontario, Canada.

2. Early.

3. Berries medium, firm, excellent quality. Canes are virgorous and spineless.

4. An old variety still grown somewhat in North Central States and in New England.

5. Should be grown from mosaic-free stock.

WASHINGTON

1. Washington.

2. Late.

3. Berries medium to large, deep red, of high quality.

4. A Major variety in the Pacific Northwest for freezing, canning, and preserving.

WILLAMETTE

1. Oregon.

2. Midseason.

3. Berries very large, nearly round, medium red, very firm, of good quality. Good for freezing and canning. Bushes vigorous, very productive, sucker freely.

4. Grown extensively in the Pacific Northwest.

Purple Raspberries

CLYDE

1. New York.

2. Late.

3. Berries large, firm, tart. Bushes hardy, very productive; vigorous, stout canes.

4. Northeastern U.S.

5. Moderately anthracnose resistant.

MARION

1. New York.

2. Late.

3. Berries large, firm, tart, of good quality. Bushes vigorous, productive.

4. Becoming more popular in Northeastern States.

SODUS

1. New York.

2. Midseason.

3. Berries very large, fairly firm, of good quality. Plants vigorous, productive winter hardy, and drought resistant.

4. Widely planted as a home-garden variety in Northeastern States.

Black Raspberries

ALLEN

1. New York.

2. Midseason.

3. Berries large, firm, many ripe at one time. Bushes virgorous, productive.

4. North Central and Northeastern U.S.

BLACK HAWK

1. Iowa.

2. Very late.

3. Berries large, firm, glossy, have good flavor. Plants vigorous, productive, very hardy.

4. Widely grown in Eastern U.S.

5. Somewhat anthracnose resistant but mildew susceptible.

BLACK PEARL (PEARL)

1. Missouri.

2. Early ripening with short season.

3. Berries large and firm, of good quality. Plants drought resistant.

4. Grown chiefly in Kansas and Missouri.

BRISTOL

1. New York.

2. Midseason.

3. Berries large, firm, and high flavored. Hard to pick after rain. Plants vigorous, hardy, and productive.

4. Widely grown in Eastern U.S.

5. Very susceptible to anthracnose.

CUMBERLAND

1. Pennsylvania.
2. Midseason.
3. Berries large, firm, have very good flavor. Bushes usually hardy and productive.
4. Widely grown in Eastern U.S.
5. Susceptible to anthracnose and mosaic viruses.

DUNDEE

1. New York.
2. Midseason.
3. Berries large, glossy, firm; have good flavor. Plants vigorous, hardy, and productive. Fruit hard to pick after rain.
4. Mildew susceptible.

HURON

1. New York (a 1965 introduction).
2. Late midseason.
3. Berries large, glossy, firm, good flavor. Bushes hardy, vigorous, productive.
4. Adapted in Western New York and worthy of trial elsewhere.
5. Somewhat anthracnose resistant.

NEW LOGAN

1. Illinois.
2. Ripens a week earlier than Cumberland.
3. Berries are medium size, of good quality.
4. Liked for earliness in Michigan and Eastern U.S.

MORRISON

1. Ohio.
2. Late.
3. Berries largest of black varieties, firm, glossy, of fair quality. Bushes productive.
4. Grown in New York, Pennsylvania, and Ohio.

MUNGER

1. Ohio.
2. Midseason.
3. Berries large, firm, have good flavor.
4. A leading variety in Oregon.
5. Susceptible to mildew.

PLUM FARMER (FARMER)

1. Ohio.
2. Early. Has short season; ripens so quickly that entire crop can be harvested in 2 or 3 pickings.
3. Berries large, firm, high quality. Bushes hardier than those of most other blackcaps, drought resistant.
4. An important variety in Oregon.
5. Susceptible to anthracnose and mosaic viruses; immune from curl virus.

CONTROL

The pesticides mentioned in this publication are available in several different formulations that contain varying amounts of the active ingredient. Because of differences in active ingredient, dosage rates are not indicated in this publication.

The user is cautioned to read and follow all directions and precautions given on the label of the pesticide formulation that will be used.

PRECAUTIONS

Federal and State regulations require registration numbers on all pesticide containers. Use only pesticides that carry this designation. Read and follow all directions on the label.

USDA publications that contain suggestions for the use of pesticides are normally revised at 2 year intervals. If your copy is more than 2 years old, contact your Cooperative State Extension Service to determine the latest pesticide recommendations.

The pesticides mentioned in this publication were Federally registered for the use indicated as of the issue date of this publication. Because the registration of a pesticide that you have had in your possession for some time can be changed, you may wish to check with your local agricultural authorities to determine the registration status of the pesticide.

U.S. GOVERNMENT PRINTING OFFICE : 1975—O-593-378